CLAIMS

What is claimed is:

1	1. A method comprising:
2	stacking an upper die having an upper top surface and upper first, second, third
3	and fourth edges on top of a lower die having a lower top surface and lower first,
4	second, third, and fourth edges such that the upper first edge is displaced from the
5	lower first edge by a first distance, the upper first and third edges being opposite to
6	each other, the lower first and third edges being opposite to each other, the upper top
7	surface facing toward the lower top surface; and
8	attaching the upper die to the lower die with an adhesive layer between the
9	upper and lower dies.
1	2. The method of claim 1 further comprising:
2	attaching upper and lower conductors to upper and lower bond pads of the
3	upper and lower dies at the upper and lower first edges, respectively, such that the
4	upper and lower conductors are separated by a conductor distance.
1	3. The method of claim 1 further comprising:
2	attaching upper and lower conductors to upper and lower bond pads of the firs
3	and second dies at the upper third and the lower first edges, respectively.
1	4. The method of claim 1 wherein stacking the upper die comprises:
2	stacking the upper die on top of the second die such that the upper second edge
3	is displaced from the lower second edge by a second distance.
1	5. The method of claim 4 further comprising:
2	attaching upper and lower conductors to upper and lower bond pads of the
3	upper and lower dies at the upper and lower second edges, respectively, such that the
1	upper and lower conductors are separated by a conductor distance.
1	6. The method of claim 1 further comprising:
2	attaching the lower die to a substrate by a second adhesive layer deposited
3	between the lower die and the substrate.

1	7. The method of claim 1 further comprising:
2	depositing an upper redistribution layer to place bond pads on the upper die.
1	8. The method of claim 7 further comprising:
2	depositing a lower redistribution layer to place bond pads on the lower die.
1	9. The method of claim 1 wherein stacking the upper die comprises:
2	stacking the upper die on top of the lower die, the upper and lower die having
3	same or substantially similar sizes.
1	10. The method of claim 1 wherein attaching comprises:
2	attaching the upper die to the lower die by the first adhesive layer made of a
3	non-conductive or conductive material.
1	11. A method comprising:
2	stacking a plurality of dies on top of one another in a staggering configuration
3	such that an upper die top surface in a pair of adjacent dies faces downward or upward
4	and is displaced by a first distance with respect to a lower die in the pair; and
5	attaching the adjacent dies by an adhesive layer between the adjacent dies.
1	12. The method of claim 11 further comprising:
2	attaching conductors to bond pads of the adjacent dies such that the conductors
3	are separated by a conductor distance.
1	13. The method of claim 11 wherein stacking comprises:
2	stacking the plurality of dies in a first stair-case configuration in a first
3	dimension.
1	14. The method of claim 13 wherein stacking further comprises:
2	stacking the plurality of dies in a second stair-case configuration in a second
3	dimension.
1	15. The method of claim 11 wherein stacking comprises:
2	stacking the plurality of dies in a first alternate staggering configuration in a
3	first dimension.

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2	stacking the plurality of dies in a second staggering configuration in a second
3	dimension.
1	17. The method of claim 11 further comprising:
2	depositing a redistribution layer to place bond pads on at least one of the
3	plurality of the dies.
1	18. The method of claim 11 wherein stacking comprises:
2	stacking the plurality of dies having same or substantially similar sizes.
1	19. The method of claim 11 wherein stacking comprises:
2	stacking the plurality of dies on top of a substrate; and
3	attaching a bottom die of the plurality of dies to the substrate by an adhesive.
1	20. The method of claim 11 wherein attaching comprises:
2	attaching the adjacent dies by the adhesive layer made of a non-conductive or
3	conductive material.
1	21. A die assembly comprising:
2	a plurality of dies stacked on top of one another in a staggering configuration
3	such that an upper die top surface in a pair of adjacent dies faces downward or upward
4	and is displaced by a first distance with respect to a lower die in the pair; and
5	an adhesive layer between the adjacent dies to attach the adjacent dies.
1	22. The die assembly of claim 21 further comprising:
2	conductors attached to bond pads of the adjacent dies such that the conductors
3	are separated by a conductor distance.
1	23. The die assembly of claim 21 wherein the plurality of dies are stacked in
2	a first stair-case configuration in a first dimension.
1	24. The die assembly of claim 23 wherein the plurality of dies are stacked in
2	a second stair-case configuration in a second dimension.

The method of claim 15 wherein stacking further comprises:

1	25. The die assembly of claim 21 wherein the plurality of dies are stacked in
2	a first alternate staggering configuration in a first dimension.
1	26. The die assembly of claim 25 wherein the plurality of dies are stacked in
2	a second staggering configuration in a second dimension.
1	27. The die assembly of claim 21 further comprising:
2	a redistribution layer to place bond pads on at least one of the plurality of the
3	dies.
1	28. The die assembly of claim 21 wherein the plurality of dies having same
2	or substantially similar sizes.
1	29. The die assembly of claim 21 further comprising:
2	a substrate attached to a bottom die of the plurality of dies by an adhesive.
1	30. The die assembly of claim 21 wherein the adhesive layer is made of a
2	non-conductive or conductive material